Daily Diary Report by Bid Item

Contract No.: 04-0120F4
Diary #: 1097 **Const Calendar Day:** 670 **Date:** 05-Apr-2014 **Saturday**
Inspector Name: Brignano, Bob **Title:** Transportation Engineer
Inspection Type:
Shift Hours: **Break:** **Over Time:**
Federal ID:
Location:
Reviewer: Schmitt, Alex **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** **12 PM** **4PM**
Precipitation **Condition** clear

Working Day ☑ If no, explain:

Diary: Dispute ☐

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:

ABF Engineer Kelvin Chen not at work today.

On site today from VGO are Rob Rutledge and Dave Van Dyke. They arrive on site at 0800, and leave site at 1200 to take Dave to the airport. Dave flies out of the Bay Area this afternoon. Rob works in the afternoon on the evening data reports. VGO is present for their reference electrode and pH checks at TR's 12 & 13 and then for the next jacking steps at TR's 12 & 13.

There is no other ABF work today. ABF Superintendent John Perine is present at the Pier 7 warehouse area because of the CCO 314 work – he is also present at the test rig work area for portions of the morning. ABF Safety Manager Ed Fuqua is present at the Pier 7 warehouse area because of the CCO 314 work – he is available for any safety issues at the ABF Safety Trailer.

There is no other work by ABF today on site, with work today specifically because of CCO 314. Ironworker Foreman CJ Biskner and Jared Garret start work at 0700 and are done by noon – by union agreement they are paid 6 hours. Today is Saturday, so the work is paid at 1.5x OT.

The tensioning steps are not scheduled to happen until after the morning break (10am break) so that the morning data reports can be produced and evaluated. Meanwhile, the ironworkers have other operations at the test rigs. They start by adding chain wrenches to the nuts at TR's 12 & 13. For the first tensioning step 2 days ago, a plate wrench was used, but chain wrenches, pre-positioned around the nut, can be easier to use. Then, after adding the chain wrenches, the ironworkers suggest modifying a plate wrench so that it will be easier to use and could be a better option for tightening the nut. They cut the handle from one chain wrench and weld it to the faceted socket from another wrench. They also do various cutting and grinding to improve the fit of the wrench.

After working on the wrenches, they finish work on the wire ropes to secure the traffic plates at TR's 12 & 13. Previously some of this work had been completed, but today all of it is completed when they add wire ropes to the south side of TR's 12 & 13. This work is done about 0840.

Next, some of the ABF and rented k-rail at TR's 1-4 are removed. This is to remove rented k-rail from Jenson and ABF k-rail being paid on a daily basis. If these test rigs are going to be used again, the removed 20' k-rail can be replaced with State purchased 10' k-rail that do not cost anything and provide better access to the test rigs. End plates are moved out of the way and sandbags are allowed to drop in place, to be addressed at a later date. At TR 4, 2 ABF k-rail are removed. At TR 3, 2 rental k-rail are

removed. At TR 2, 1 ABF k-rail and 1 rental k-rail are removed. Then, work stops of k-rail removal at 1000 for the morning break, to be followed by the tensioning step.

VGO performs reference electrode and pH checks at TR's 12 & 13 approximately 0900 to 0940. CT-METS is notified so that a note about the noise can be made with the AE data. It is noted that the reference electrode stays within 5 mV when compared with the master electrode in the pre- and post-checks. It is also noted that when checking the pH paper with the 7.00 buffer solution, the 4.0-7.0 pH paper and the 6.5-10.0 pH paper both read 6.5.

Starting after the morning break, the tensioning steps (0.40 Fu) at TR's 12 and 13 happen. Two ironworkers are present to operate the hydraulic pump, turn the nuts, and perform the NaCl Solution flow / air venting steps from the wet chamber at the washer notch. VGO is present to monitor the loads being used to guide the operation. Present from CT-METS is Elijah Turner with MISTRAS personnel on the phone line continuously monitoring all AE data on the two channels for each test rig during the jacking operation and the water/air venting. Present from the DJV is Hayat Tazir during the jacking operation.

Test Rig #12 (2008 Rod, ID S2-A8, Heat MJF-32, Top) Jacking Step:
This is the 2nd jacking step and the rod is being jacked to 0.40 Fu. The post-seating of the nut target is 334.320 +10/-0 kips. The expected hydraulic pressure at this locked off force is 2,000 psi. Based on the previous jacking step (0.30 Fu), the expected seating loss is at least 24-26 kips, meaning the initial jacking target is ~360-370 kips. Jacking is started at about 1021. At 2,000 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 310 kips. The hydraulic pressure is increased to 2,400 psi and the primary strain gauges give a force of 372 kips. The AE is checked with the ok given at 1023. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 370 kips (bleed loss = 2 kips). After bleeding off the jacks, the primary strain gauges give a force of 341 kips (seating loss = 29 kips). The force is within the specified tolerance at 1025.

Test Rig #13 (2008 Rod, ID S2-A8, Heat MJF-32, Bottom) Jacking Step:
This is the 2nd jacking step and the rod is being jacked to 0.40 Fu. The post-seating of the nut target is 334.320 +10/-0 kips. The expected hydraulic pressure at this locked off force is 2,000 psi. Based on the previous jacking step (0.30 Fu), the expected seating loss is at least 22-23 kips, meaning the initial jacking target is ~360-370 kips. Jacking is started at about 1027. At 2,000 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 323 kips. The hydraulic pressure is increased to 2,300 psi and the primary strain gauges give a force of 362 kips. The AE is checked with the ok given at 1029. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 359 kips (bleed loss = 3 kips). After bleeding off the jacks, the primary strain gauges give a force of 330 kips (seating loss = 29 kips). The tension in the rod after seating the nut is not within tolerance. For the second jacking step, at 1031, at 2,350 psi hydraulic pressure per the dial gauge, the primary strain gauges give a force of 371 kips. The AE is checked with the ok given at 1032. The nut is tightened. Prior to bleeding off the jacks, the primary strain gauges give a force of 370 kips (bleed loss = 1 kip). After bleeding off the jacks, the primary strain gauges give a force of 341 kips (seating loss = 29 kips). The force is within the specified tolerance at 1034.

After the tensioning steps at TR's 12 and 13, the NaCl Solution flow / air venting steps through the notch in the washers need to be completed at the wet chambers. This step was done two days ago and there are no changes to the wet chambers at this dead end, but the DJV has requested that this step be performed every other day regardless. The operation of flowing NaCl Solution from the notch involves removing the plumbers putty and backer rod, flowing NaCl Solution for few minutes (flows into SWPPP containment on the concrete slab), documenting the flow with photos and videos, pushing a small piece of closed cell backer rod in the notch in the washer, and sealing over the backer rod with plumbers putty. This operation at TR 13 is at approximately 1040. This operation at TR 12 is at approximately 1040. The NaCl Solution level dropped very little in both wet chambers from this operation, but we still refill the wet chambers at both test rigs at approximately 1045.

In the morning, after the wet chambers had been filled for almost 48 hours, the NaCl solution levels in the wet chambers had dropped on the order of 1/8" to 1/4" due to leakage. From observations yesterday

(Friday 4/4/2014), it appears that most of that leakage was in the first day (Thursday 4/3/2014). Then, the venting of the NaCl solution and potential entrapped air through the notch in the washer for a few minutes dropped the NaCl solution level a similar amount. The NaCl solution levels were topped off today with another 1/4" to 1/2" of NaCl solution even thought the level had not dropped enough to be a concern.

After the tensioning and venting steps, starting at about 1055, the ironworkers resume work on the TR's 1-4 k-rail. At TR 2, another 2 rental k-rail are removed. Then, 6 removed rented k-rail are separated and moved to a location that will be convenient for pickup. Sometime next week it is anticipated that a truckload (6 k-rail is a standard truck load) will be picked up and returned to Jenson to get them off rent. The ironworkers are done with the k-rail operations by about 1120. Then, they do some miscellaneous site cleanup and pickup their tools. The end of the shift is 1200.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is on idle/standby at the test rig work area. A 40kW generator – MQ Power 40 – ABF ID 002051 is used to run the hydraulic pump for the jacks for less than an hour. An oxyacetylene torch is on idle/standby at the test rig work area. A compressor – IR P185 ABF ID 000002 is on idle/standby at the test rig work area. A Hyster 155 forklift and an extendable forklift are used at the test rig work area.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. Some k-rail is removed from TR's 1-4 today – some of this is rented k-rail that will be removed some the site later next week and some of it is ABF's k-rail that is moved to an area for ABF storage. The k-rail quantities are as follows:
10' bought k-rail = 20 pieces
10' ABF k-rail = 4 pieces
20' rented k-rail = 16 pieces (although 6 pieces are set aside for pickup to remove from rent)
20' ABF k-rail = 16 pieces (3 pieces removed today)
Note that this includes three 20' ABF k-rail between the CCO 314 work area and FW Spencer's yard, with that k-rail being in place prior to the CCO work and not related to CCO 314.

The agreed extra work with ABF is as follows:
Ironworker Foreman CJ Biskner - 6 hrs OT
Ironworker Jared Garrett - 6 hrs OT
Extendable Forklift - 4 hrs OT
Hyster 155 Forklift - 1 hr OT
40kW Generator - 1 hr OT
k-rail: 16 pcs @20' and 4 pcs @10'
Crane Mats (12x12 - 5'x16') - 4 pcs
Crane Mats (12x12 - 5'x7') - 15 pcs
See the attached Extra Work Order - Signed with ABF for CCO 314 work

INSPECTOR OT REMARK:

Field and Office 8 hours on Saturday: Field 0700 through 1200, and office work with some field visits through 1530. ABF is working in the field from 0700 to 1200 (with 6 hrs paid per union agreement). I visit the test rigs in the afternoon to check for leaks and rod breaks. In the office I am addressing various CCO 314 issues with the DJV and CT-METS. The ABF shift is 0700 to 1200 on CCO 314 operations. My shift and my OT hours are 0700 to 1530.